

**METHOD AND APPARATUS FOR ROUTING MESSAGES IN
HYBRIDIZED OPTICAL/WIRELESS NETWORKS**

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ABSTRACT

Method and apparatus for routing messages in a network includes first filters to provide frequency-based message signals converted from an optically-based signal and mixers adapted to mix the frequency-based message signals with sub-carriers to generate frequency-based sub-carrier modulated message signals. A frequency generator connected to the mixers provides the sub-carriers to the mixers and a combiner connected to the mixers combines the frequency-based sub-carrier modulated message signals. Second filters connected to the combiner receive and group the frequency-based sub-carrier modulated message signals. Optical transmitters connected to second filters optically convert and transmit the frequency-based sub-carrier modulated message signals. The frequency generator generates and applies a particular sub-carrier frequency to one of the mixers according to information contained in the frequency-based message signal. The information is encoded into the frequency-based message signal via a generalized MPLS (GMPLS) label contained in a header portion of the frequency-based message signal.